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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/853,137	05/10/2001	Marty J. Ryberg	101948017US1	6194

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EXAMINER

BELIVEAU, SCOTT E

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 12/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/853,137

Applicant(s)

RYBERG, MARTY J.

Examiner

Scott Beliveau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-15 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-15 and 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 14 October 2005 has been entered.

Response to Arguments

2. With respect to applicant's traversal and requested showing as to the existence of "wireless links" associated with a plurality of data communication protocols including but not limited to USB, the examiner notes that support for such is found and/or has been already provided of record as follows:
 - The previously cited Hall et al. reference discloses a wireless distribution system within an aircraft.
 - The previously cited Kuo reference discloses the particular usage of a wireless passenger entertainment system in order to reduce the weight penalty to an aircraft and to reduce maintenance time requirements.
 - The previously cited Oxman reference discloses a wireless aircraft passenger audio entertainment system.

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The newly cited Garney et al. (US Pat No. 5,890,015), Hamdi et al. (US Pat No. 6,912,651), and Lazzarotto et al. (US Pat No. 6,782,245) references also further provide evidence as the exemplary usage and existence of “wireless links” associated with USB protocols in particular.

3. Applicant's arguments with respect to claims 1, 8, and 15 have been considered but are moot in view of the new ground(s) of rejection.

With respect to applicant's arguments regarding claim 15, applicant's set forth that the aircraft communication system includes “. . . an integrated signal unit that communicates a plurality of disparate signals of an aircraft bus to and from the passenger seat via a wireless link . . .”. However, the examiner notes that the actual claim language does not correspond to applicant's arguments in that it recites “. . . an integrated signal unit that communicates a plurality of disparate signals of an aircraft bus to and from the passenger seat, which signal unit interfaces to the aircraft bus via a wireless link . . .”.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 15, and 17-20 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the

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claimed invention. Turning to Figure 2, newly amended claim 15 sets forth an “integrated signal unit” [100] that “communicates a plurality of disparate signals of an aircraft bus” [105] “to and from the passenger seat” [90] wherein the “signal unit” [100] “interfaces to the aircraft bus via a wireless link” (presumably [105]). Turning to Figure 2, the specification, as originally filled, sets forth that links “109” may be wired or wireless and that links “105” are similar, or identical to prior art lines “60”, “70”, and/or “80” which are described as being preexisting telecommunication lines which are typically wirelines (IA: Page 6, Line 12 – Page 7, Line 22). The specification further sets forth that the particular aircraft bus “107” is adapted to receive signals from signal generating devices (not shown) through wired or wireless links, but does not set forth the links are necessarily those interfacing the bus “107” to the integrated signal unit “100” as opposed to the signal generating devices which are disclosed as not being shown. Applicant’s response further traverses that the particular usage of “wireless links” is not well known in the art or considered to be obvious variation which further suggests that links “105”, which are described as being similar or identical to prior art lines, are not to be construed as wireless links. Accordingly, in light of Figure 2, the specification as originally filed, and applicant’s arguments with respect to the particular usage of “wireless links” as not being well known, the record is considered as only disclosing that link “109” is wired or wireless and link “105” is wired. Therefore, the particular limitation such that the “signal unit interfaces to the aircraft bus via a wireless link” is considered new matter.

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6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 2, and 4-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Galipeau et al. (US Pat No. 6,249,913 B1) in view of Garney et al. (US Pat No. 5,890,015)

In consideration of claim 1, Figure 1 of the Galipeau et al. reference illustrates an “integrated communication system for an aircraft” [10] having “at least one passenger seat” [12] (Col 4, Line 51 – Col 4, Line 20). As illustrated in Figures 6/B, the system comprises an “integrated signal unit” [18] that is operable to “receive and transmit a plurality of signals of disparate nature to and from a user of the at least one passenger seat in the aircraft” [12] (Col 6, Line 64 – Col 9, Line 21), a “plurality of aircraft communication links” (ex. seat-to-seat cable [20], RS-232 data ports, USB, IEEE-1394, etc.) “interfaced with the integrated signal unit for carrying the plurality of signals of disparate nature throughout the aircraft” [10] from sources of the plurality of signals of disparate nature” [72] (Col 5, Lines 26-34), and a “receiving device” [124/130/144/154] “interfaced to at least one passenger seat and in communication with the integrated signal unit” [18] for “receiving at least one of the plurality of signals and outputting a signal to a passenger in the passenger seat” (Figure 9B).

With respect to the limitation that the “plurality of aircraft communication links include pre-existing aircraft telecommunication wiring”, as aforementioned, the reference discloses that the installed wiring supports the communication of information comprising audio, video, and telephony signals from remote locations thereby facilitating telecommunication services

(Col 4, Lines 21-52). The particular wiring utilized within the aircraft system of Galipeau et al. is broadly construed as being “pre-existing” given that it existed before the filling of the instant application. Alternatively, the wiring is construed as “pre-existing” in the context of it necessarily existing prior to the user operating the system so as to facilitate the communication of signals between system components. Alternatively, the wiring would be considered “pre-existing” should a “integrated signal unit” [18] fail and be subsequently replaced by an operational unit (Col 6, Lines 57-62). Additionally, the reference further explicitly incorporates by reference provisional application 60/103,823 which discloses that the system may take advantage of existing wiring within the aircraft in connection with system installation or system upgrades in order to take advantage of cost savings associated with the reuse of previously installed components (Examiner designated Page 9 - 3.7 Upgrade Requirements; Page 29 – Overview – What is Voyager? (cont.)). Such wiring may include reusing the “pre-existing aircraft telecommunication wiring” associated with the telephony system (Pages 2 and 3 – Section 3.2 Telephone Distribution System; Pages 35-38 – Telephony Subsystem).

As illustrated in Figures 6A/B, the Galipeau et al. reference illustrates the particular usage of USB in order to enable the “signal unit” [18] to “communicate the plurality of disparate signals to and from the passenger seat”. The reference, however, is silent with respect to the usage of a “wireless link” such as that associated with the disclosed USB interconnection. In a related art pertaining to data distribution, the Garney et al. reference discloses the particular usage of a “wireless link” for interconnecting USB peripherals (Abstract; Figure 4-6 and 8; Col 6, Lines 3-34). Accordingly, it would have been obvious to

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one having ordinary skill in the art at the time the invention was made so as to modify Galipeau et al. so as to employ a USB “wireless link” as taught by Garney et al. for the purpose of advantageously providing a means so as to interconnect USB devices using current technologies for transmitting wireless signals thereby advantageously enhancing passenger mobility, providing greater flexibility by eliminating maximum cable length requirements, and reducing aircraft the weight penalty through the elimination of peripheral wiring.

Claim 2 is rejected wherein the “plurality of signals of disparate nature comprise at least one of audio signals, video signals, and data signals” (Col 3, Lines 1-10).

Claim 4 is rejected wherein the “receiving device comprises a speaker” (Col 7, Lines 55-59).

Claim 5 is rejected wherein the “receiving device comprises a video monitor” [154] (Col 9, Lines 17-25).

Claim 6 is rejected wherein the “receiving device comprises a telephone handset” [144] (Col 8, Lines 47-50).

Claim 7 is rejected wherein the “receiving device comprises an intercom” [124] (Col 8, Lines 4-10).

Claim 8 is rejected wherein the Galipeau et al. reference discloses a “communications system” for use in an “aircraft” [10]. As previously set forth, the “system” comprises a “seat unit at a passenger seat” (Col 4, Lines 1-12) “operable to receive a plurality of signals bussed through the aircraft” [18] (Figures 1 and 6A/B), a “first audio processing circuit” [196] “operable to generate audio signals . . . being coupled to the seat unit over a wireline

communication channel” [20] (Figures 9 A/B; Col 11, Lines 9-21), and a “first telephone signal processing circuit” [188] “operable to receive and send telephone signals . . . being coupled to the seat unit over a wireline communication channel” [20] (Figures 9 A/B; Col 10, Lines 39-46). The “seat unit” [18], as illustrated in Figures 6 A/B further comprises a “first audio processing receiving circuit” [120] “operable to receive the audio signals for processing and delivery to a passenger audio transducer” (or speaker) (Col 7, Line 33 – Col 8, Line 39), a “second telephone signal processing circuit” [142] “that is operable to receive and send . . . the telephone signals for delivery to and from a passenger telephone handset” [144] (Col 8, Line 40 – Col 9, Line 15) and “electrically circuitry” [92] “coupled to and shared by the first audio processing receiving circuit and the second telephone processing circuit” (Col 6, Lines 7-13).

As aforementioned, Figures 6A/B of the Galipeau et al. reference illustrates the particular usage of USB in order to enable the “signal unit” [18] to “communicate the plurality of disparate signals to and from the passenger seat”. The reference, however, is silent with respect to the usage of a “wireless link” such as that associated with the disclosed USB interconnection. In a related art pertaining to data distribution, the Garney et al. reference discloses the particular usage of a “wireless link” for interconnecting USB peripherals (Abstract; Figure 4-6 and 8; Col 6, Lines 3-34). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made so as to modify Galipeau et al. so as to employ a USB “wireless link” as taught by Garney et al. for the purpose of advantageously providing a means so as to interconnect USB devices using current technologies for transmitting wireless signals thereby advantageously enhancing

passenger mobility, providing greater flexibility by eliminating maximum cable length requirements, and reducing aircraft the weight penalty through the elimination of peripheral wiring.

Claim 9 is rejected wherein the “plurality of signals comprise at least one of audio signals, video signals, and data signals” (Col 3, Lines 1-10).

Claim 10 is rejected wherein the “first audio processing circuit comprises a radio audio processing unit” [196] (Col 11, Lines 9-21).

Claim 11 is rejected wherein the system further comprises a “second audio processing circuit” [194] “operable to generate audio and video signals and being coupled to the seat unit” [18] over a “wireline communication channel” [20] (Figure 9/A; Col 10, Line 61 – Col 11, Line 8).

Claims 12 and 13 rejected wherein the “passenger audio transducer comprises a video monitor” [154] and “speaker” for outputting the audio associated with the video programming (Col 9, Lines 21-25 and 32-37).

Claim 14 is rejected wherein the system further comprises a “telephone handset” [144] “coupled to the first telephone signal processing circuit for directing telephone signals to a passenger” [188] (Col 2, Lines 24-36; Col 10, Lines 39-46).

8. Claims 15 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott et al. (US Pat No. 5,790,787) in view of The IBM Technical Disclosure Bulletin (hereafter the “IBM-TDB”).

In consideration of claim 15, Figure 5 of the Scott et al. reference illustrates a “communications system for an aircraft”. The system comprises an “integrated signal unit”

[7] that “communicates a plurality of disparate signals for an aircraft bus” [15/17] (Col 6, Lines 10-19) “to and from the passenger seat” within the aircraft (Col 1, Lines 19-27; Col 7, Lines 22-26) and a “receiving system” [1/3/5 + telephone] “interfaced to the passenger seat and in communication with the signal unit that receives at least one of the plurality of disparate signals and outputs a signal to a passenger in the passenger seat” for viewing/listening by the passenger.

As illustrated the “signal unit interfaces to the aircraft bus” [15/17] using a LAN, RS-485, Ethernet, or other protocols, however, it is unclear if such necessarily comprises a “wireless link” as claimed. The IBM-TDB provides evidence as to the existence of “wireless links” which serve as a bridge between a digital devices and a wired-LAN. Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made so as to modify the “link” between the “integrated signal unit” [7] and the “aircraft bus” [15/17] so as to employ a “wireless link” for the purpose of eliminating additional interconnecting wires which interconnect the existing system associated with the aircraft and the “integrated signal unit” for the benefit of reduced cost and convenience advantages associated with the utilization of a wireless bridging link (IBM-TBD: Para. 3).

In consideration of claim 15, Figure 1 of the Galipeau et al. reference illustrates a communication system for an aircraft” [10] comprising an “integrated signal unit” [18] that “communicates a plurality of disparate signals of an aircraft bus” [20] “to and from the passenger seat” wherein the “signal unit” [18] interfaces to the “aircraft bus” via wiring such as those associated with USB, IEEE-1394, or the like. As illustrated in Figures 6A/B, the system further comprises a “receiving system” associated with the user’s

handset/telephone/video monitor [124/144/154] which is in “communication with the signal unit that receives at least one of the plurality of disparate signals and outputs a signal to a passenger in the passenger seat” including those associated with telephony, audio programming and video services as aforementioned (Figure 9B).

As aforementioned, the Galipeau et al. reference illustrates the particular usage of USB in order to enable the “second telephone processing circuit” [142] to send and receive signals to the “passenger telephone handset” [144]. The reference, however, is silent with respect to the usage of a “wireless link” such as that associated with the disclosed USB interconnection. In a related art pertaining to data distribution, the Garney et al. reference discloses the particular usage of a “wireless link” for interconnecting USB peripherals (Abstract; Figure 4-6 and 8; Col 6, Lines 3-34). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made so as to modify Galipeau et al. so as to employ a USB “wireless link” as taught by Garney et al. for the purpose of advantageously providing a means so as to interconnect USB devices using current technologies for transmitting wireless signals thereby advantageously enhancing passenger mobility, providing greater flexibility by eliminating maximum cable length requirements, and reducing aircraft the weight penalty through the elimination of peripheral wiring.

Claim 17 is rejected wherein the “signal unit” [7] “reformats at least one of audio signal and video signals into reformatted information and transmits the reformatted information passenger seat” for presentation to the user (Col 7, Line 41 – Col 7, Line 12).

Claims 18 and 19 are rejected wherein the “signal unit reformats audio signals as audio data” and necessarily “transmits the audio data on an unused channel” in accordance with the

network standard such that “the signal is sent to the passenger seat for output to the passenger via an unused channel of the existing telecommunication lines” in order for the user to selectively receives and listen to a discrete audio selection. For example, it is unclear as to how the network comprising a number of channels would send information over a channel that is currently used or busy and still provide the user with the selected audio programming.

Claim 20 is rejected wherein the system further comprises an “integrated receiver” [20/21/24] “associated with the passenger seat and in communication with the signal unit such that a plurality of signals received thereunto are parsed and presented to the passenger on a logical basis”. For example, the “integrated receiver” is capable of present a plurality of signals corresponding to audio programming logically through the usage of headphones and is also integrated with telephony functionality (Figure 4).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure as follows. Applicant is reminded that in amending in response to a rejection of claims, the patentable novelty must be clearly shown in view of the state of the art disclosed by the references cited and the objections made.

- The Hamdi et al. (US Pat No. 6,912,651) reference discloses a computer system which utilizes a wireless USB bus.
- The Lazzarotto et al. (US Pat No. 6,782,245) reference discloses a wireless peripheral interface for use in coupling a USB.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Beliveau whose telephone number is 571-272-7343.

The examiner can normally be reached on Monday-Friday from 8:30 a.m. - 6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on 571-272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SEB
December 1, 2005

Scott Beliveau
Examiner
Art Unit 2614